DPD 0549-59 Cy\_of\_{ 21 January 1959

TO

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SUBJECT: Elimination of Noise Interference, Elint Systems

- "P" Band of System VI and receivers 1A and 1B of System IV are not now fully operational because of radiation interference from electrical devices in the aircraft, including radiations from components of the Elint systems.
- 2. Several modifications and changes in wiring have been made in an effort to eliminate this problem, but each change seems to uncover new sources of interference. In an effort to solve the problem, was recently directed to undertake an overall program to locate and eliminate the interference. The program as proposed by would use Lockheed Aircraft Corporation and Ramo-Wooldridge to solve the problem. R & W estimated that the program would last twelve weeks and the cost estimate for R &  $\bar{\text{W}}$  participation was \$7840. LAC estimated that the program would last six weeks at a LAC cost of \$20,000. If the program lasts the full twelve weeks as estimated by R & W, the total cost for the program will be \$47,840. There is no guarantee that the program will be entirely successful, but the probability of success is reasonably good. Some noise reduction is certain.
- 3. Necessary modification kits to eliminate the interference from all aircraft would be an additional, but unestimated cost.
- 4. I have discussed this problem with the Elint Staff Officer and it is our opinion that the expenditure of the total sum of money to make "P" Band of System VI and receivers

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lA and lB of System IV operational cannot be fully justified at this time. However, this noise problem does effect System VII which is now in development. The elimination of noise interference is absolutely vital to the success of this system. Therefore, when considering all of our Elint system, the expenditure of this relatively large sum is justified.

- 5. Another approach to this problem which is possible, is to consider System VII separately. By flying no other Elint system on a System VII mission, by turning off certain electrical equipment in the aircraft, and by testing and making minor modifications during the test phase of System VII, it may be possible to eliminate interference to System VII. We could then try to solve the interference to the other two systems by making field tests and field designed modifications. This program would probably take several months to complete and the probability of success is somewhat less than an overall approach to the problem.
- 6. Based on all of the factors involved, I recommend that you approve the necessary expenditure of funds to go ahead with an overall program at designed to locate and eliminate all of the noise interference so as to make System VII and the affected bands of System IV and VI fully operational at the earliest possible date.

Communications Officer

Distribution:

Orig & 1 - Addressee

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Recommendation Paragraph 6 Approved:

Not approved - See DPD-0135-59 dtd 1/27/59

RICHARD M. BISSELL, JR. DD/P

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